

## **POTENTIAL PLACES OF REFUGE: PART ONE – INTRODUCTION**

### **Purpose and Scope**

This Potential Places of Refuge (PPOR) section supplements information found elsewhere in the Southeast Subarea Contingency Plan for Oil and Hazardous Substances Spills and Releases, commonly referred to as the Southeast Subarea Contingency Plan (SCP). Information about sensitive areas associated with PPOR may be found in the Sensitive Areas - Section D of the SCP. Information about response strategies to protect sensitive areas and areas of public concern associated with PPOR may be found in the Geographic Response Strategies – Section G of the SCP.

A “place of refuge” is defined as a location where a vessel needing assistance can be temporarily moved to, and where actions can then be taken to stabilize the vessel, protect human life, reduce a hazard to navigation, and/or protect sensitive natural resources and other uses of the area (e.g., subsistence collection of mussels, commercial fishing, recreational boating). A place of refuge may include constructed harbors, ports, natural embayments, potential grounding sites, or offshore waters. This section identifies potential docking, anchoring, and mooring, locations that may be selected as Places of Refuge in the Southeast Subarea. Actual designation of a Place of Refuge will always be an incident-specific decision made by the U.S. Coast Guard Captain of the Port for Southeast Alaska.

The Southeast Subarea has approximately 11,000 miles of environmentally sensitive coastline. In addition to sensitive shoreline habitats such as marshes, sheltered tidal flats, and exposed tidal flats, Southeast supports a number of sensitive biological resources including birds, fish and shellfish, and marine mammals. Additional information about identification of sensitive areas and resources may be found in Section D of the SCP. Additional information about protection of sensitive areas may be found in Section G of the SCP.

The Southeast Subarea lands are managed under a variety of land use management plans including;

- Revised Land Resource Management Plan for the Tongass National Forest, 1997
- City and Borough of Juneau Coastal Management Plan, 2008.
- City of Craig Coastal Management Plan, 2007.
- Skagway Municipality Coastal Management Plan, 2007
- City of Hoonah Coastal Management Plan, 2007
- City of Thorne Bay Coastal Management Plan, 2007
- City and Borough of Yakutat Coastal Management Plan, 2008.
- City of Pelican Coastal Management Plan, 2007
- Haines Borough Coastal Management Plan, 2007
- Sitka Area Coastal Management Plan, 2005
- Ketchikan Gateway Borough, Coastal Management Plan, 2008.
- General Management Plan, Glacier Bay National Park, 1984

The Southeast Subarea is also widely used for marine commerce. Log transport ships, fuel barges, freighters, container ships, ferries, and cruise ships make routine stops at Southeast ports. Also, commercial fishing boats, sport fishing charter boats, and privately-owned vessels regularly use local harbors and docks.

There is no perfect docking, mooring, anchoring, or grounding site for all vessels in all situations. Deep draft vessels, such as oil tankers and cruiseships, cannot be taken to certain locations. Some ports may have shallow approaches or small bays, and deep draft ships cannot enter these locations. However, shallow draft vessels, such as fishing vessels and charter vessels, may be able to utilize

these shallower ports. For the purposes of this section, vessels have been divided into three categories: deep draft, light draft and shallow draft.

Deep Draft Vessels are vessels of 20-40 feet of draft, greater than 10,000 GT, lengths up to 1000 feet and require anchor swinging room of \_ mile. Cruiseships and container ships and tank vessels are the predominant deep draft vessels operating in Southeast.

**Light Draft Vessels a with draft up to 20 feet and up to 450 feet in length. Anchor swing room or \_ mile.** Freighters, catcher processors, and ferries are the most common light draft vessels operating in Southeast.

**Shallow Draft Vessels** are less that 300 Gross Tons, generally draw less that 15 feet and are less that 200 feet in length. Fishing vessels, fishing tenders, tour boats, and pleasure craft make up the majority of the shallow draft vessels operating in Southeast.

The information in this section may be used for a vessel of any size that has suffered an incident that creates need for a temporary place of safe refuge, but it is focused on deep draft and light draft size vessels. PPOR for shallow draft vessels have not been addressed in this section, due to the large number of potential sites in the Subarea.

## **How the Document Was Developed**

This section was developed in 2009 by a Work Group of interested and knowledgeable stakeholders in keeping with the Alaska Regional Response Team's "Guidelines for Places of Refuge Decision-Making," (Alaska Federal/State Preparedness Plan for Response to Oil and Hazardous Substance Discharges/Releases, Annex O). The Work Group arrived at a consensus on the potential places of refuge and submitted this document to the Subarea Committee for approval and inclusion in the Southeast Subarea Contingency Plan. The Work Group participants represented the following organizations:

- Alaska Department of Environmental Conservation
- Alaska Department of Natural Resources
- Alaska Department of Fish and Game
- Southeast Alaska Pilots Association
- U.S. Coast Guard, Sector Juneau
- U.S. Department of the Interior – Offices of Environmental Policy and Compliance, Fish and Wildlife Service, and National Park Service
- U.S. Environmental Protection Agency
- City and Borough of Juneau
- Municipality of Skagway
- Ketchikan Gateway Borough
- Central Council of the Tlinglet Haida Indian Tribes of Alaska

The first step of the PPOR process was to identify candidate sites (anchorage, moorings, docks/piers,) within the Southeast Subarea. The Workgroup began by researching available information to determine major risk factors in the Southeast Subarea. Maps were developed, depicting the following risk and logistical information:

- Locations of bulk fuel facilities and pipelines (Figure H-1);
- Primary traffic routes for noncrude carrier routes (Figure H-2);
- Primary traffice routes for cruise ships and ferry traffic (Figure H-3)
- Locations of hatcheries (Figure H-4);
- Locations of aquatic farms (Figure H-5)

Locations of spill response agreements, response equipment containers, and nearshore equipment packages (Figure H-6);  
Locations of Geographic Response Strategies (Figure H-7)  
Locations of major airports (Figure H-8)  
Locations of major oil spill events (Figure H-9);

The second step led to the identification of 51 PPOR sites within the Southeast Subarea. A site assessment matrix (Table H-2) and key (Table H-1) was developed. This matrix consists of identified sites in each row with information about risk factors and site selection criteria in the columns. The information presented for each site includes:

PPOR identification;  
Response Zone #;  
Type of Berth;  
Name;  
Body of Water;  
Latitude;  
Longitude;  
Maximum Vessel Depth  
Anchoring Swing Room or Dock Face in feet;  
Depth at dock face;  
Depth at anchorage;  
Bottom Type;  
Exposure to;  
Conflicting uses;  
Ability to boom;  
GRS in the area;  
Sensitive Resources;  
Distance to population centers; and  
Distance to alternate PPOR.

The PPOR identification method begins either a “D” or “L,” which indicates the appropriate size vessel for the site. “D” will correspond to deep draft vessels, “L” is light draft vessels. Following the letter is a number which indicates the response zone in which the site is located. Finally is a number which is a unique site identifier with no importance attached to the magnitude of the number.

The site assessment matrix contains potentially suitable emergency anchorage, docking, moorage, and potential grounding locations based on operational factors such as water depth, swing room, exposure/protection, and navigational approach. Sites are grouped by the individual response zones and then by the maximum vessel size category suitable for the site.

Step 3 was to identify specific factors that should be considered as part of the site assessment process. These factors include:

- Distance from population and logistics centers;
- Proximity to environmentally sensitive areas, wildlife resources, threatened or endangered species or habitats, and/or historic properties;
- Uses, such as fisheries, mariculture sites, tourism and recreational use, subsistence use, and the location of public or private facilities;
- Response factors such as booming feasibility and the proximity to existing Geographic Response Strategy (GRS) sites; and
- The distance from the closest alternative PPOR.

Figure H-10 is a composite map of all risk factors combined.

## **How to Use the Potential Places of Refuge Section**

The "Guidelines for Places of Refuge Decision-Making" (Annex O of the Unified Plan) will be used for places of refuge decision-making in the Southeast Subarea. As outlined in the guidelines, when the U.S. Coast Guard Captain of the Port (COTP) receives a request from a vessel master or his/her representative to move a vessel to a place of refuge--or in the event there are no individuals on board the vessel authorized to make the request, or the vessel has been abandoned and the COTP needs to consider moving the vessel to a place of refuge--the COTP will initiate the decision-making process in Appendix 1 of Annex O. As outlined in Steps 2 and 3 in Appendix 1, if the COTP/ Unified Command determines that places of refuge should be considered for an incident-specific response, the information in the Southeast PPOR document may be used to provide background information to help expedite the incident-specific place of refuge decision. The steps of the decision-making process are summarized as:

1. Place of refuge assistance requested,
2. Immediate action required by COTP,
3. COTP/Unified Command evaluates vessel options,
4. COTP/Unified Command selects vessel option,
5. COTP/Unified Command evaluates potential places of refuge based on operational criteria,
6. COTP/Unified Command selects potential places of refuge based on operational criteria,
7. Stakeholders provided with places of refuge options,
8. Stakeholders provide ranking of places of refuge options,
9. COTP/Unified Command selects places of refuge, and
10. COTP/Unified Command prepares documentation of decision.

The information provided in this document should help decision-making by providing site-specific information to the COTP/Unified Command.

Part Two of this document contains site-specific information for some of the PPOR in the Southeast Subarea. An index map (Figure H-11) on the next page of this section shows the location of the PPOR maps. Each PPOR map consists of two parts: 1) a map page showing a locator map, picture, and detailed nautical charts; and 2) a table page providing site information and local site conditions. All geographic data was collected using Mercator Projection, North American Datum 1983.

## **Who to Contact for Input**

Comments and recommendations on these PPOR are welcomed. Please send your comments to either of the following agencies:

Alaska Department of Environmental Conservation  
Prevention and Emergency Response Program  
555 Cordova Street  
Anchorage, AK 99501

United States Coast Guard  
Captain of the Port, Southeast Alaska  
2760 SHERWOOD LANE, SUITE 2A  
JUNEAU, AK 99801-8545

## POTENTIAL PLACES OF REFUGE: PART TWO – PPOR MAPS

### Index of PPOR Maps

The Workgroup developed 9 PPOR Maps within the Southeast Subarea to correspond with the response zone established by oil spill responders in the area. These maps aid in the site assessment process. These maps are larger in scale, showing a small portion of the Subarea in more detail than the maps in Part One. Figure H-11 provides an overview of the Subarea, identifying the location of each PPOR Map. Each PPOR Map has been assigned an identifying number, which has no relevance other than as a map identifier.



Figure H-11. Southeast Alaska Zone Map for Potential Places of Refuge.

### PPOR Maps

Each PPOR Map consists of two parts: 1) a graphic showing a locator map, pictures, and detailed nautical charts showing the location of anchorages, docks, moorings, potential grounding sites and other information critical to the selection of a place of refuge; and 2) a series of tables providing site information regarding local site conditions, environmental sensitivities and other considerations.

## **POTENTIAL PLACES OF REFUGE: PART THREE – REFERENCES**

Alaska Regional Response Team. October 2004. Alaska Federal/State Preparedness Plan for Response to Oil and Hazardous Substance Discharges/Releases, Annex O, Guidelines for Places of Refuge Decision-Making.

Dept of Commerce - National Oceanic & Atmospheric Administration (NOAA), National Ocean Survey can provide detailed hydrographic charts of PPOR locations upon request. Contact Dave Neander, [Dave.Neander@noaa.gov](mailto:Dave.Neander@noaa.gov), (206) 526-6949, NOAA/ORR, 7600 Sand Point Way, NE, Seattle, WA 98115.

International Maritime Organization (IMO). July 17, 2003. Draft Assembly Resolutions Finalized by Nav. 49, Annex 1 Guidelines On Places Of Refuge For Ships In Need of Assistance.

Pacific States/British Columbia Task Force. December 2004. Guidelines for Places of Refuge

U.S. Coast Guard, Marine Safety Office Southeast, 2007. Southeast Alaska Marine Firefighting Contingency Plan.

### **Useful Websites**

Alaska Dept. of Environmental Conservation, Southeast GRS Information  
**<http://www.dec.state.ak.us/spar/perp/grs/se/home.htm>**

Alaska Dept. of Natural Resources. Southeast Public Access Atlas.  
**<http://www.dnr.state.ak.us/mlw/planning/easmtatlas/>**

Alaska Dept. of Natural Resources, Southeast Subarea maps including, general maps, land use and management maps, biologically sensitive area maps, most environmentally sensitive area maps, environmentally sensitive index maps, and geographic response strategies.  
**<http://www.asgdc.state.ak.us/maps/cplans/subareas.html#cook>**

Alaska Regional Response Team, Southeast Subarea Contingency Plan,  
**<http://www.akrrt.org/SEAKplan/SEAKtoc.shtml>**

U.S Bureau of Land Management. Alaska Land Information System.  
**<http://www.ak.blm.gov/alis/>**